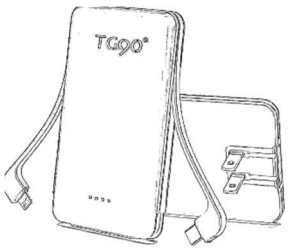
BS14 – Breaker Simulator for the 14 pin Interface

Powering ON

1) Charging Cube and cable *(120 VAC source available)*
   a) Connect the provided USB-A connector to the charging cube and plug into 120 VAC power source.
   b) Connect the USB C end of the cable to the 5V input on the BS14.
   Note* No data connection on USB port
2) Power Bank Instructions *(120 VAC source unavailable)*
   a) Click power button once
   b) Hold down for about 7 seconds or until lights blink across individually
   c) This enters the bank into low power mode. Lights should intermittenly blink. **Note*Powerbank will power down after 30 seconds if low power mode is NOT enabled, this must be done every time.**
   d) Plug USB C cable built into power bank (hidden on bottom, see picture) to the 5V input on the BS14.
   e) Double click to turn off power bank.
   f) Charge power bank with wall outlet attachment plugs on the back of the power bank or by plugging in a USB C cable to receptical.



Front Controls

1) Red and Green light buttons operate the breaker
2) Holding button will force that position and allow testing of breaker fail
3) The "69" permissive switch mimics the switch on the tank of many recloser breakers
   a) The "UP" position allows for normal operation
   b) The "Down" position forces the mechanism open and opens the close signal path

Sense Output

1) The sense is a dry contact
2) Switchable between "a" and "b" contact. Shipped in "a" position.
3) When switching between "a" or "b" position move both jumpers on the circuit board near the sense fuse.

Current Inputs

1) The 14 pin interface pins G, H, J are non-polarity inputs I1, I2, I3
2) Pin K is polarity of the residual connection
3) See the specific relay manuals for connection details
4) The phase designation is generally programmable in the relay

Potential Inputs

1) The 14 pin interface does not include potential connections. Potential inputs must be made directly to the relay

Breaker Time

1) The operating time of the simulator should be initially measured by timing a manual trip and close of the breaker.
2) All relays have different de-bounce times as well as input and output delays
3) Most relays process signals at regular intervals, like 0.25 cycle, etc. Where the signal is initiated in the cycle can cause variations in time.
4) The open and close time should be calibrated separately

Fusing:

- Current Inputs – 10 A fuses
- Sense Output – 1 A fuse
- Trip and Close Inputs – 500 mA fuses

For questions:
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